

## **WHAT IS CLAIMED IS:**

1. An in-mold foaming method for making soles, the method comprising the steps of:

1) inputting foaming material (rubber) in mold, wherein a

5 volume percentage of foaming material in cavity of the mold is pre-calculated based on specific gravity;

2) foaming the rubber material in the mold for 4-8 minutes at centigrade 140-150 deg, under pressure 130-150 kg/cm<sup>2</sup>, so as to form the sole directly in the mold cavity;

10 3) opening the mold and remove the sole so as to cool the foamed sole;

4) completing a semi-finished product of sole.

2. The in-mold foaming method for making soles as claimed in

claim 1, wherein before the step 1) inputting foaming material (rubber) in

15 mold, can be added with process for making special portions, which including the procedures as follows:

1) compressing portions “a” and “b” with middle plate: middle plate of the mold initially used to compress the special portions where is preinstalled with raw material into the cavity of the mold;

20 2) cleaning off the scraps of the raw material after compression: cleaning scraps of raw material off the mold after the special portions are compressed;

3) inputting foaming material in mold;

- 4) in-mold foaming step: forming the rubber material in a vacuum platform for 5 minutes at centigrade 150 deg under pressure 130-150 kg/cm<sup>2</sup>, such that semi-finished product of sole is formed directly in the cavity of the mold, and the semi-finished product of sole is integrally formed with the special portions;
- 5) cooling the sole;
- 6) getting semi-finished products: completing the semi-finished product of sole.

3. The in-mold foaming method for making soles as claimed in

- 10 claim 1, wherein high sidewall can be synchronously formed on periphery of the sole during the in-mold foaming step.

4. The in-mold foaming method for making soles as claimed in

- claim 1, wherein periphery structural pattern can be synchronously formed on periphery of the sole during the in-mold foaming step.

15

20